

## **REMARKS/ARGUMENTS**

### **1.) Claim Amendments**

Claims 1-22 are pending in the application. The claims have not been amended in this response. Favorable reconsideration of the application is respectfully requested in view of the following remarks.

### **2.) Claim Rejections – 35 U.S.C. § 112**

Claims 1-5, 10-11, 13-14, 19, and 21-22 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Applicants respectfully disagree.

The Examiner states that although a system voice prompt is taught, the specification does not specifically teach the voice prompt is an “outgoing system voice prompt”. From the perspective of the system, a voice prompt intended for a user is always “outgoing”. Everyone skilled in the art knows this, and therefore the specification does not need to specifically recite this word. The word “outgoing” was added to the claims because in the Office Action of July 17, 2007, the Examiner confused the system voice prompt with an input signal disclosed in Mitchell (US 6,574,595). The word “outgoing” is also recited in the claim to preclude any ambiguity and ensure the claim meets the requirements of 35 U.S.C. § 112, second paragraph.

The Examiner also states that claims 1, 10, 11, and 19 are rejected because the specification teaches a user-input command, but does not specifically teach that the commands are user-generated. There is no other type of user-input command other than a user-generated one. If the command was not user-generated, it would not be a user-input command. Everyone skilled in the art knows this, and therefore the specification does not need to specifically recite this word. The term “user-generated” is recited in the claim to preclude any ambiguity and ensure the claim meets the requirements of 35 U.S.C. § 112, second paragraph.

For the above reasons, the withdrawal of the § 112 rejection is respectfully requested.

**3.) Claim Rejections – 35 U.S.C. § 103(a)**

The Examiner rejected claims 1, 4, 9-13, 18-19, and 20-21 under 35 U.S.C. § 103(a) as being unpatentable over Hill, et al. (US 2004/0226459) in view of Jones (US 2007/0198267) and further in view of Johnston (US 6,603,836). The Applicants respectfully disagree.

The Examiner cites page 6, paragraph 0063 of Hill for disclosing the Applicant's detailed steps for processing the input signal. The input signal is recited to include both user speech and an echo of the outgoing system voice prompt. The Applicant's invention compares the input signal to an acoustic prompt model (for the outgoing voice prompt) and to a target vocabulary model (for the user input speech) to determine whether the user input speech or the system voice prompt provide the best match.

Hill discloses only that the system generates a system voice prompt and then compares an input response to grammars that specify the expected caller responses. There is no teaching or suggestion whatsoever of distinguishing between user input speech and the echo of the system voice prompt, which are received together in the input signal.

The Examiner cites pages 4-5, paragraphs 0065-0067 of Jones for disclosing the step of generating an acoustic model of the outgoing system voice prompt. The Applicants note that Jones is directed toward a system for delivering the services requested by a user through a voice-activated system. Jones states that the details of voice recognition are beyond the scope of the invention. (Page 4, paragraph 0064). In paragraphs 0065-0067, Jones provides only a brief overview of known methods for recognizing phonemes and chaining them together to form syllables or words. Like Hill, there is no teaching or suggestion whatsoever of distinguishing between user input speech and the echo of the system voice prompt, which are received together in the input signal.

The Examiner cites column 5, line 49 through column 10, line 39 of Johnston for disclosing the step of receiving an input signal that comprises at least one user-generated command word and an echo from an outgoing system voice prompt, wherein at least one word of the outgoing system voice prompt is included in the echo received

in the input signal. Although Johnston discloses this step, it does not distinguish between the user input speech and the system voice prompt in the same way as the present invention. Johnston first recognizes that user input speech is present by detecting a signal level within a frequency band such as 1200 Hz to 1300 Hz, which the system voice prompt avoids. Johnston then resolves the user input signal from the system voice prompt in the following manner:

On receiving the signal 23, the dialogue controller 30 instructs the recorded speech processor 25 to halt its output of the prompt R3. Soon after, the echo of the prompt ceases to be a component for signals received at the speech recogniser 22, and the recogniser is better able to recognise the word currently being spoken by the user. Once the response of the user has been recognised, it is passed to the dialogue controller 30. (Col. 6, lines 47-54).

Thus, rather than processing the combined signal and comparing the signal against two different voice models as in the Applicants' claimed invention, Johnston attempts to quickly stop the system voice prompt and listen only to the remainder of the user input speech. This is entirely different from the claimed invention.

Since Hill, Jones, and Johnston either individually or collectively fail to teach or suggest all of the limitations of independent claims 1, 10, 11, and 19, the withdrawal of the § 103 rejection and the allowance of claims 1, 10, 11, and 19 are respectfully requested.

Claims 2-9, 12-18, and 20-22 depend from independent claims 1, 11, and 19 and recite further limitations in combination with the novel elements of these claims. Therefore, the allowance of claims 2-9, 12-18, and 20-22 is respectfully requested.

The Examiner rejected claims 2-3 under 35 U.S.C. § 103(a) as being unpatentable over Hill, et al. (US 2004/0226459) in view of Jones (US 2007/0198267) and Johnston (US 6,603,836) and further in view of Backfried (US 6,801,893). The Examiner cited Backfried for disclosing a process of building a model of an outgoing system voice prompt. However, Backfried does not teach or suggest processing an input signal that comprises at least one user-generated command word and an echo

from an outgoing system voice prompt, and comparing the signal against two different voice models as in the Applicants' claimed invention. Therefore, the combination of Hill, Jones, Johnston, and Backfried does not establish a *prima facie* case of obviousness. Therefore, the withdrawal of the § 103 rejection and the allowance of claims 2-3 are respectfully requested.

The Examiner rejected claims 6 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Hill, et al. (US 2004/0226459) in view of Jones (US 2007/0198267) and Johnston (US 6,603,836) and further in view of Mitchell et al. (US 6,574,595). The Examiner cited Mitchell for disclosing several steps of the claimed invention. However, as discussed in Applicants' response dated September 17, 2007, Mitchell deals only with an input signal, and does not contemplate a model for an outgoing system voice prompt. Therefore, the combination of Hill, Jones, Johnston, and Mitchell does not establish a *prima facie* case of obviousness. Therefore, the withdrawal of the § 103 rejection and the allowance of claims 6 and 15 are respectfully requested.

The Examiner rejected claims 7-8 and 16-17 under 35 U.S.C. § 103(a) as being unpatentable over Hill, et al. (US 2004/0226459) in view of Jones (US 2007/0198267) and Johnston (US 6,603,836) and Mitchell et al. (US 6,574,595) and further in view of Bridges (US 5,978,763). This is obviously a hindsight-based rejection because it is not possible for anyone skilled in the art to have found these five different references, selected just the right limitations, and combined them in the recited manner without the benefit of hindsight gained from reviewing the Applicants' disclosure. Therefore, the withdrawal of the rejection is respectfully requested.

Furthermore, the Examiner cited Bridges for disclosing the step of comparing the input signal to a noise model that represents background babble. However, as discussed in Applicants' response dated September 17, 2007, Bridges does not teach or suggest a model of the outgoing system voice prompt. Consequently, Bridges does not teach or suggest a comparison to such a model, and no determination is made as to whether the model of the outgoing system voice prompt or the model of the user-generated command words provides the best match.

As noted in Applicants' response dated April 24, 2007, Bridges's solution to the problems caused by the voice prompt echo is to establish a threshold for the recognition of voice commands based on the echo return loss. Voice commands must exceed the threshold to be recognized and acted upon. Bridges notes the disadvantage that some commands may not be recognized, but accepts this disadvantage because it is preferable to being too sensitive and stopping the voice prompt when the user did not barge in. (Col. 3, lines 8-24). This is entirely and totally different from what is recited in the Applicants' claims.

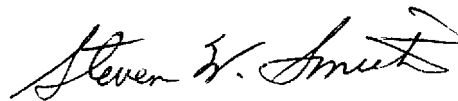
Therefore, the combination of Hill, Jones, Johnston, Mitchell, and Bridges does not establish a *prima facie* case of obviousness. Therefore, the withdrawal of the § 103 rejection and the allowance of claims 7-8 and 16-17 are respectfully requested.

#### 4.) Conclusion

In view of the foregoing remarks, the Applicants believe all of the claims currently pending in the Application to be in a condition for allowance. The Applicants, therefore, respectfully request that the Examiner withdraw all rejections and issue a Notice of Allowance for claims 1-22.

The Applicants request a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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